


Protecting Outdoor Workers From Climate Change Impacts Through Interdisciplinary Collaboration

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The risks posed by climate change on outdoor workers' health and safety demand immediate attention. Approximately 64 million workers in the United States spend between 2% to over 66% of their working hours outdoors (U.S. Bureau of Labor Statistics [BLS], 2020). These workers include those in traditional industries like agriculture, construction, and landscaping, as well as atypical contexts, such as emergency responders, farmers' market staff and vendors, and professional athletes. Outdoor workers experience the health consequences of exposure to the growing frequency and intensity of extreme events (e.g., wildfire smoke, extreme temperatures, flooding) due to climate change. When they cannot work, there are economic and social implications for the workers and society, including loss of wages and productivity and increased health care costs. In addition, low-income populations and communities of color are disproportionately affected due to their higher representation in many strenuous outdoor occupations (Environmental Protection Agency [EPA], 2021).

Recognizing the complex and dynamic nature of climate change and its profound impact on outdoor workers, it is evident that occupational health nurses and professionals cannot address these challenges in isolation. Interdisciplinary and cross-sector approaches are currently used for addressing complex public health problems. For instance, the Centers for Disease Control and Prevention (CDC, 2019) recognizes the health care sector as a crucial partner for climate adaptation planning in their guide to cross-sector approaches. Health care professionals can collaborate with public health professionals to co-design education materials and preventive actions that can help safeguard community members. Other interdisciplinary partners include occupational health professionals, union representatives, urban planners, environmental science professionals, emergency management personnel, and more. Important to note

is that collaboration in this context needs to extend beyond mere agreement and communication. Leveraging existing professional networks and affiliations and engaging in organizations like Alliance of Nurses for Healthy Environments (<https://envirn.org>), Science and Community Action Network (<https://scican.org/welcome/>), and the American Public Health Association (<https://www.apha.org>) provide valuable strategies to initiate interdisciplinary collaboration. By harnessing diverse expertise, interdisciplinary collaboration across sectors holds influence over decision-makers and institutional leaders, compelling them to implement more robust protections for outdoor workers.

Furthermore, community-based participatory research (CBPR), a "people-centered approach to addressing real-world problems" (Chen et al., 2020, p. 37), is pivotal in advancing our understanding and strategies to reduce the health impacts of climate change on outdoor workers. This methodology offers a framework to identify regional and community-specific challenges, thereby enabling tailored interventions for each affected group (Fetherman et al., 2021). An illustration of successful CBPR implementation focusing on health promotion at smaller worksites, as explained by Fetherman et al. (2021), showcases a cross-sector partnership between an academic institution and a nonprofit organization. The collaborative efforts resulted in a marked improvement evaluated by the CDC Worksite Health ScoreCard total score from 61 to 182 over a 3-year period (Fetherman et al., 2021). This work exemplifies interdisciplinary collaboration, with the academic institution providing scientific knowledge and research expertise while the nonprofit organization contributes practical insights and hands-on experience working directly with the identified worker population. The integration of these perspectives through the partnership helps develop comprehensive strategies to address the workplace's specific needs.

The adverse health effects of extreme heat on outdoor workers are well supported by current evidence. Interdisciplinary cross-sector collaboration and CBPR are vital tools to improve planning, implementation, evaluation, and other standards of practice. Since climate-specific regulations have not

been set by the U.S. Occupational Health and Safety Administration, interdisciplinary collaboration plays a critical role in outdoor worker protection. Occupational health nurses and other occupational health and safety professionals can leverage interdisciplinary expertise to drive positive and meaningful change at the forefront of outdoor worker health.

Conflict of Interest

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